

NATIONAL CENTER FOR EDUCATION STATISTICS

Integrated Postsecondary Education Data System (IPEDS)

IPEDS Data Center User Manual Part 2

INTEGRATED POSTSECONDARY EDUCATION DATA SYSTEM (IPEDS) DATA CENTER

User Manual

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Chapter

Create / Download a List of Variables

This chapter contains detailed instructions for creating, modifying, and saving a list of variables for a data file or report in the IPEDS Data Center.

PEDS variables are the units of data collected annually from all providers of postsecondary education in the United States. As such, they constitute the criteria by which institutions can be compared, analyzed, and evaluated in the IPEDS Data Center. These data cover a wide-range of topics, including basic institutional characteristics, admissions considerations, enrollment and retention rates, graduation and program completion rates, student financial aid, institutional finances, and human resources.

A number of options are available within the Data Center for retrieving and analyzing these data, all of which are discussed in greater detail in subsequent chapters of this User Manual. When using any of these features, however, it is essential to know how to select the variables that you want to evaluate.

This can be done in several ways (click on the links below to learn more about each):

Browse/Search Variables

Create Derived Variables

Upload Variables (Power User Account Required)

The methods you use will most likely vary depending on your data needs and which report you are generating, so it is a good idea to familiarize yourself with each of the available processes.

As you select variables, they will be stored in your **My Variables** list, for easy access should you wish to use them again during your current Data Center session. This list can be <u>modified</u> at any time or <u>saved</u> for future use in subsequent Data Center sessions. Click on the corresponding links to learn more about each process.

Browse/Search Variables

This is the default method of choosing variables for your data file/report. Select this option to browse a list of IPEDS variables and/or search for variables by name or keyword.

You can access this option at any time by clicking on the **Browse/Search Variables** link from the Select Variables toolbar, as shown below. The IPEDS Variable Tree is displayed:



Browsing the IPEDS Variable Tree

The IPEDS Variable Tree is comprised of all existing IPEDS variables, for all available data years, categorized by the IPEDS survey from which the data were collected. You can browse the tree as needed, clicking on the control icon to expand a section of the tree, and the control icon to collapse it. Once a category is expanded, that section of the tree is highlighted in orange, as shown below:



As you navigate the tree, use the IPEDS Survey categories to guide you. Variables are broadly grouped into the following categories:

| Frequently Used and Derived Variables | This section of the tree is comprised of the most commonly referenced and/or derived variables in the IPEDS universe. Start your search here – you may be able to find the desired data among this list of frequently used variables. |
|---------------------------------------|---|
| Institutional Characteristics | Includes variables related to basic institutional data and directory information such as: Institution name, address, telephone number, and web address. Control/affiliation and award levels offered. Educational offerings, mission statements, and special learning opportunities (e.g. work study programs, distance learning, etc.). |
| Admissions and Test Scores | Includes variables related to admissions considerations and requirements, the number of applicants, admissions, and subsequent enrollees during a specified data year, and 25 th and 75 th percentile SAT and ACT test scores of applicants. |
| Student Charges | This section of the tree is comprised of all variables related to institutional pricing including tuition and required fees, room and board charges, cost of books and supplies, and miscellaneous expenses. |
| Fall Enrollment | Includes variables related to Fall enrollment for all students enrolled in credit-bearing courses/programs for award levels ranging from postsecondary certificates of less than one year to doctoral degrees. This includes: The number of full-time and part-time students enrolled at an institution in the Fall, broken down by various demographics such as race/ethnicity, gender, age, level of study, and major field of study. Retention rates for the full and part-time Fall cohort. Residence and migration of first-time freshman. |
| 12-Month Enrollment | Includes variables related to 12-month enrollment data collected for all students enrolled in credit-bearing courses/programs for award levels ranging from postsecondary certificates of less than one year to doctoral degrees. This includes: 12-month unduplicated headcounts broken down by various demographics, such as race/ethnicity, gender, and level of student. 12-month instructional activity (contact vs. credit hours) and full-time equivalent (FTE) enrollment (calculated based on instructional activity). |

| Completions | Includes variables related to the number of degrees and other formal awards/certificates conferred at an institution during a specified academic year, broken down by various demographics such as race/ethnicity, gender, level of study, and length of program. |
|-----------------------|--|
| Graduation Rates | This section of the tree is comprised of graduation data for full-time, first-time degree/certificate seeking undergraduate students. Includes variables related to: The number of students who graduate within 150% of the normal time, broken down by race/ethnicity and gender. The number of students receiving a Bachelor's or equivalent degree within a 4-year, 5-year, or 6-year time period, broken down by race/ethnicity and gender. The number of students receiving athletically related student aid and graduation rate data for these students. |
| Student Financial Aid | This section of the tree is comprised of financial aid data collected for full-time, first-time degree/certificate seeking undergraduate students. Includes variables related to federal grants, state and local government grants, institutional grants, loans, the number of students receiving each type of assistance, and the average amount of assistance received. |
| Finance | Includes variables related to institutional financial resources and expenditures, such as: Institutional revenues broken down by source. Institutional expenditures broken down by function. Physical plant assets. Level of indebtedness |
| Human Resources | Includes variables related to institutional staffing and salaries, such as: The number of full and part-time institutional staff by function/occupational category. The number of full-time faculty broken down by contract length and salary class intervals. Tenure of full-time faculty by academic rank. Total and average salary outlays for full-time instructional faculty by academic rank. |

☑ Tip

When browsing the tree, note that variables are not listed in alphabetical order, but rather in the order in which they appear in the related IPEDS survey.

Within each category, colors are used to identify variables as **Continuous**, **Alpha/String**, or a **Categorical**. For your convenience, a "key" is provided at the top of the Select Variables toolbar to help you quickly and easily identify the different types of variable, as shown below:



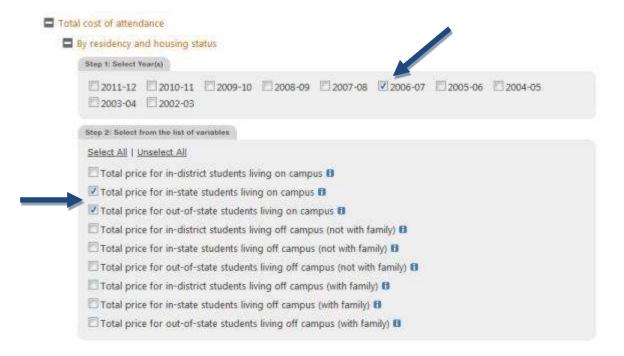


Types of Variables

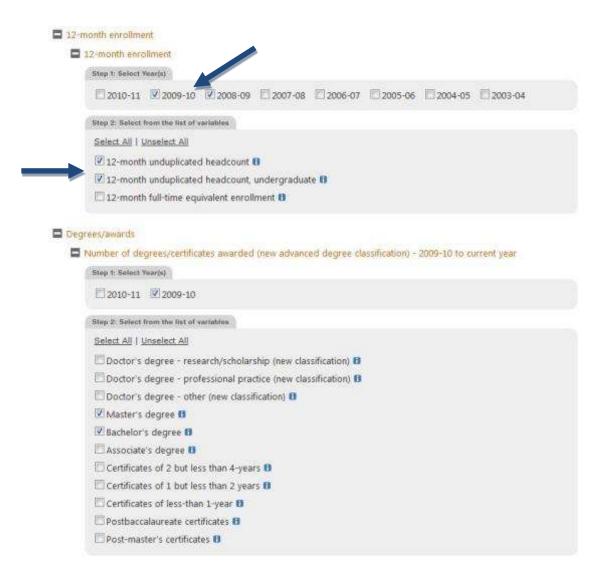
A Continuous variable can take on any possible value within the limits of the variable range (such as total student enrollment or salary outlays of full-time instructional staff); a Categorical variable can only take on one of a fixed set of possible values (such as sector of institution or geographic region); and an Alpha/String variable has a unique, alpha-numeric value gathered from a single source (such as institution name or street address).

To view a detailed description of any variable, click on the adjacent icon. A popup screen will appear containing a description of the variable, its IPEDS survey source, the variable value set (for categorical variables such as geographic region, sector of institution, etc.), and value statistics, where available.

When you are ready to make a selection, click on the corresponding checkboxes to select both the data years(s) [Step 1] and variable(s) [Step 2] that you want to include in your data file/report:



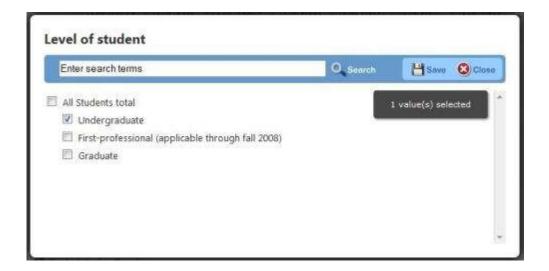
You can select as many variables as you want from the various sections of the tree. Note, however, that for *each* file (or sub-section of the tree) from which you select variables, you must also indicate the unique data year(s) for which you want to evaluate the variables from that file, as shown below:



Some variables may also require that you provide additional information in order to further define the selected data items (e.g. one or more CIP codes for Completions data, the Level of Student for Fall Enrollment data, etc.). These variables incorporate an alternate three-step selection process, as shown below:



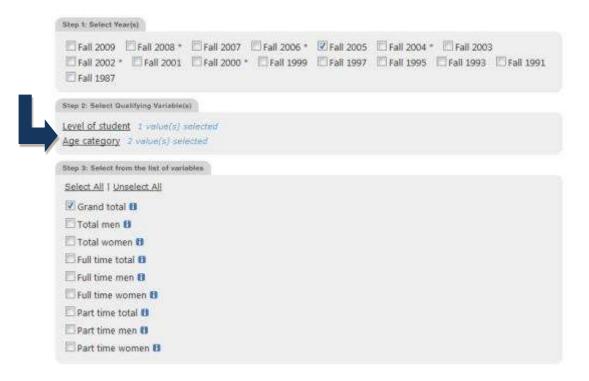
Click on the corresponding links in **Step 2** to specify values for *each* of the additional data elements indicated. When the related pop-up screen appears, select one or more values of interest from the list of available options, as shown below:



You can use the con, where applicable, to expand a menu item and view all of its available components. In addition, you can search for values by name (or partial name) by entering criteria in the **Enter Search Terms** box. As shown below, a list of potential matches will be displayed as you type:



Once you are satisfied with your selections, click to save all entries and close the pop-up screen. You can reopen this window at any time to modify the selected values. Note that as you make selections a count will appear next to each data element:





It is important to make sure that you have entered values for *each* of the data elements indicated. Otherwise an error will occur, and you will be prompted to fill in the missing values before continuing.

When you are finished browsing the IPEDS Variable Tree and selecting variables for your data file/report, click **Continue**. The specified variables will be added to your **My Variables** list, as shown below:





Test your knowledge:

Using the Browse/Search Variables option, browse the IPEDS Variable Tree and add the following variables to your My Variables list for data year 2005-06: Sector of institution, Total price for in-state students living on campus, and Admissions total, as well as the full-time female undergraduate enrollment for Fall 2006. When you are finished, save your Variable List to complete this exercise.

Searching for Variables by Name and/or Keyword

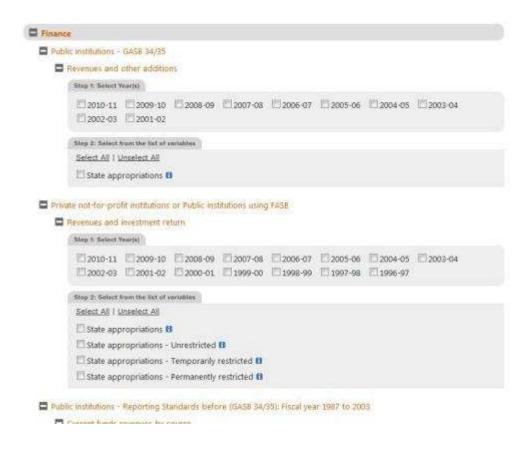
You can also search for variables by name and/or keyword. Enter all (or part) of your search criteria in the **Search for a Variable** box, as shown below. A list of potential matches will be displayed as you type:



☑ Tip

When searching for variables by keyword, keep your search criteria as simple as possible. Try limiting entries to just one or two key terms, such as "enrollment" or "admissions yield" in order to return the most comprehensive list of search results possible.

You can use the components: icon, where applicable, to expand a menu item and view all of its available components:

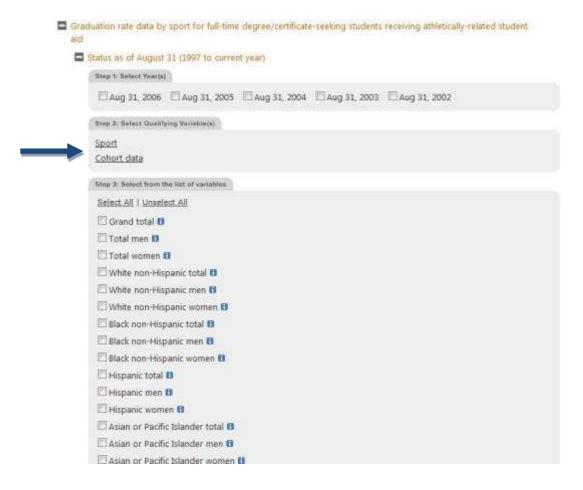


To view a detailed description of any variable, click on the adjacent icon. A popup screen will appear containing a description of the variable, its IPEDS survey source, the variable value set (for categorical variables such as geographic region, sector of institution, etc.), and value statistics, where available.

When you are ready to make a selection, click on the corresponding checkboxes to select both the data years(s) [**Step 1**] and variable(s) [**Step 2**] that you want to include in your data file/report:



Some variables may also require that you provide additional information in order to further define the selected data items (e.g. one or more CIP codes for Completions data, the Level of Student for Fall Enrollment data, etc.). These variables incorporate an alternate three-step selection process, as shown below:



Click on the corresponding links in **Step 2** to specify values for *each* of the additional data elements indicated. When the related pop-up screen appears, select one or more values of interest from the list of available options, as shown below:



As with the main variable tree, you can search for values by name (or partial name) by entering criteria in the **Enter Search Terms** box. A list of potential matches will be displayed as you type.

Once you are satisfied with your selections, click to save all entries and close the pop-up screen. You can reopen this window at any time to modify the selected values. Note that as you make your selections, a count will appear next to each data element, as shown below:





It is important to make sure that you have entered values for *each* of the data elements indicated. Otherwise an error will occur, and you will be prompted to fill in the missing values before continuing.

When you are finished reviewing the list of search results and selecting variables for your data file/report, click **Continue**. The specified variables will be added to your **My Variables** list for the current data file/report.



Test your knowledge:

Using the **Browse/Search Variables** option, search for variables related to the keyword *faculty*. From the search results screen, select **Tenure status and academic rank of full-time faculty**, and add this variable to your **My Variables** list using whatever data years and qualifying variable values you deem appropriate. When you are finished, <u>save</u> your Variable List to complete this exercise.

Create Derived Variables

The Create Derived Variables option allows you to derive new, custom variables through addition, subtraction, or division of the existing IPEDS survey variables. For example, when viewing older enrollment data, you might want to combine the enrollment figures for men and women in order to get a grand total, or you might divide the average amount of institutional grant aid received by students at an institution by the total price of attendance in order to compute the percentage of costs typically met by such funding.

To access this option, click on the **Create Derived Variables** link from the Select Variables toolbar, as shown below:





Before creating a new derived variable, check the **Frequently Used / Derived Variables** section of the IPEDS Variable Tree. This section of the tree contains some of the most commonly referenced and/or derived variables in the IPEDS universe. As such, the data you are interested in computing may already be available there. To access the IPEDS Variable Tree click on the **Browse/Search Variables** option from the Select Variables toolbar; then click on the icon to expand and view the list of **Frequently Used / Derived Variables**.

When creating a derived variable, the first step is to specify the type of calculation you want to perform:

To create a variable, select the calculation type, then click Continue.



Click on the adjacent radio button to select one of the following options; then click **Continue**.

Summation

This option allows you to combine the values of two or more IPEDS variables. For example, you might add together the number of Bachelor's degrees awarded in Engineering, Biology, Math, and Physical Science in order to compute the total number of Bachelor's degrees awarded in the fields of Math and Science.

Difference

This option allows you to subtract the value of one IPEDS variable from another. For example, you might subtract the number of students admitted to an institution in a specified academic year from the number that applied in order to determine the number of applicants that were denied admission.

Ratio

This option allows you to divide the value of one IPEDS variable by another. For example, you might divide institutional expenditures related to salaries and wages by total expenses in order to derive the percentage of operating costs allocated to salaries at a selected institution.

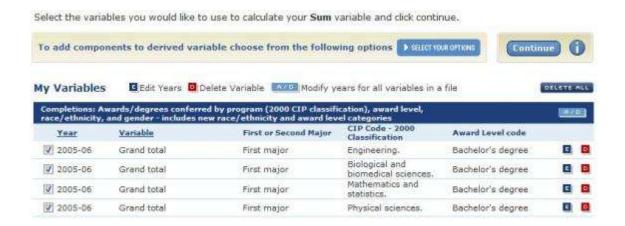
Once you have identified the calculation type, the next step is to choose the variables that you want to use to define your derived variable. By default, the IPEDS Variable Tree is displayed. You can browse the list of IPEDS variables and/or search for variables by name or keyword, as shown below:



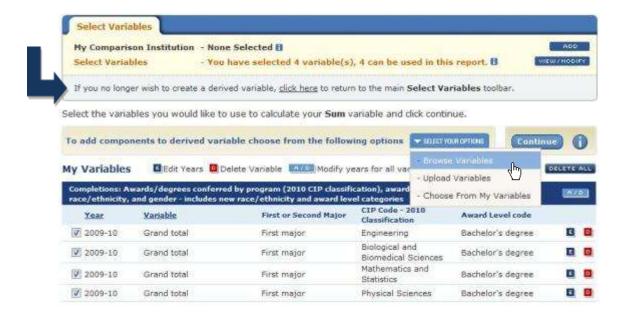
If you have a previously saved list of variables, created in either the Data Center or the IPEDS Peer Analysis System, you can retrieve it at any time by clicking on **Upload Variables** from the Create Derived Variables toolbar:



Additionally, if you have already selected/uploaded variables for a previous function during the current Data Center session, you can select the **Choose From My Variables** option to access your existing **My Variables** list:



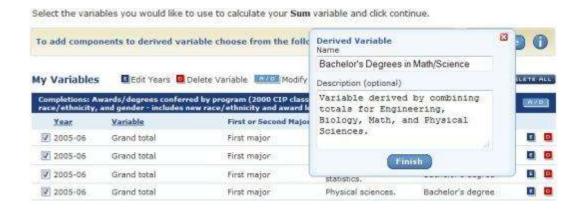
From either of the above options, you can click on the any time to choose from a drop down list of available choices for selecting the components of your derived variable and navigate to the selected option accordingly:



Throughout this process, any new variables that you select while adding components to your derived variable will be stored in your **My Variables** list for future use. In addition, you may click on the corresponding link (shown above) to cancel the Create Derived Variables process at any time and return to the main Select Variables toolbar.

Summation Variables

To calculate a summation variable, click on the corresponding checkboxes to select the variables that you want to combine; then click **Continue**. A pop-up screen will appear prompting you to enter a name for the variable (required) and optionally a description, as shown below:

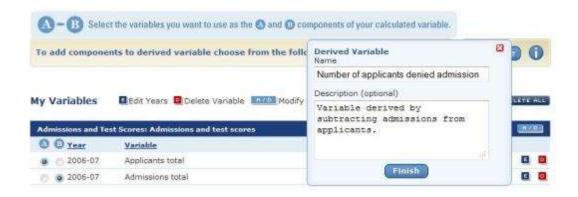


When you are satisfied with your entries, click **Finish**. The derived variable will be added to your **My Variables** list, as shown below:



Difference Variables

To calculate a difference variable, click on the corresponding radio buttons to select the **A** and **B** components of your derived variable. In this case, the **A** component is the original value you wish to subtract *from*, and the **B** component is the value you wish to take away, as shown below. Once you have identified both components of your derived variable, click **Continue**; a pop-up screen will appear prompting you to enter a name for the variable (required) and optionally a description:



When you are satisfied with your entries, click **Finish**. The derived variable will be added to your **My Variables** list, as shown below:

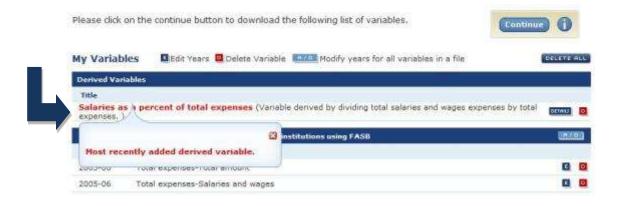


Ratio Variables

To calculate a ratio variable, click on the corresponding radio buttons to select the **A** and **B** components of your derived variable. In this case, the **A** component serves as the numerator and the **B** component as the denominator of your derived variable, as shown below. Once you have identified both components of your derived variable, click **Continue**; a pop-up screen will appear prompting you to enter a name for the variable (required) and optionally a description:



When you are satisfied with your entries, click **Finish**. The derived variable will be added to your **My Variables** list, as shown below:





Test your knowledge:

Using the **Create Derived Variables** option, compute average institutional grant aid received as a percent of the total price of attendance. This will be a ratio derived variable with **Average amount of institutional grant aid received** as the numerator, and **Total price for in-state students living on campus** as the denominator. When you are finished, <u>save</u> your Variable List to complete this exercise.

Upload Variables

If you have a previously saved list of variables created in either the Data Center or the IPEDS Peer Analysis System that you would like to use for the current data file/report, you can retrieve it at any time by clicking on the **Upload Variables** link from the Select Variables toolbar, as shown below:





Please note that a Power User account is required to upload Variable List files to the Data Center. Click on the link to <u>Login</u>, and then enter your User Name and Password when prompted. If you do not have a Power User account you can create one by clicking on the link to <u>Create an account</u>.

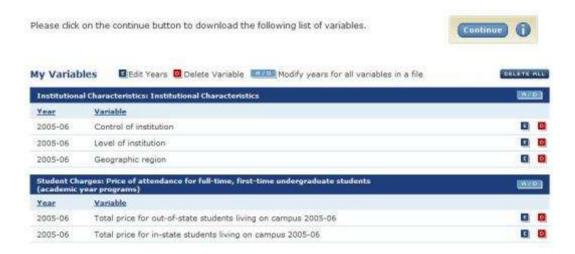
Once you have logged in, you can retrieve your file by entering the complete path and filename in the box provided, as shown below; or use the **Browse** button to locate the file on your computer's hard drive. *Hint:* Variable List files will have a filename extension of .mvl.



When you are finished, click **Submit**. The uploaded variables will automatically be added to your **My Variables** list for the current data file/report.

Modifying Your List of Variables

As you navigate the Data Center, selecting IPEDS variables for various functions and purposes, these variables are stored in your **My Variables** list, as shown below. The variables in this list will be stored throughout your current Data Center session for use as needed in any data files or reports you choose to generate.



Note the active column headers for <u>Year</u> and <u>Variable</u>. This list can be sorted! Click on the corresponding column heading to sort the variables in a particular file accordingly.

You can add to this list or make changes at any time. The following actions are available for modifying your list of variables:

-- Select this option to add or delete data years for all variables from a particular file. When the related pop-up screen is displayed, click on the corresponding checkboxes to select/unselect data years for the specified file. When you are finished, click **Save** to apply these changes and return to your **My Variables** list.

When the related pop-up screen is displayed, click on the corresponding checkboxes to select/unselect data years for the specified variable. When you are finished, click **Save** to apply these changes and return to your **My Variables** list.

- Select this option to delete the corresponding variable from your **My Variables** list.

Saving Your List of Variables

You can save your list of variables (including any derived variables that you have created) at any time and access it later during subsequent Data Center sessions. To do so, select one of the following formatting options; then follow the steps outlined below to save your data accordingly:

Save data on the NCES server

The information from your current Data Center session can be saved on the NCES server for thirty days. To utilize this option, click on the link from the navigation menu at the top of the screen. You will receive a Job Number for your saved data. **This Job Number is very important!** You will need it to retrieve your data during future Data Center sessions. Write it down for safekeeping, and/or enter your email address in the space provided and click **Send** to have the Job Number emailed to you, as shown below:



Download in CSV format

You can also download your list of variables to your computer's hard drive in zipped, comma separated values (CSV) format. To do so, select the **Create/Download a list of variables** option from the **Main Menu**; then, from the **My Variables** view, click **Continue**. Your browser will walk you through the file save process. The filename extension for your saved Institution Group will be .mvl.



Do not modify the filename extension in any way or the system will not be able to recognize the file when you try to upload it, and it will subsequently be unusable.